CLAIMS:

1. A method of inhibiting proliferation of a target cell, comprising contacting the cell with a GPC5 antagonist or a GPC5 binding agent.

2. A method according to claim 1 wherein the target cell inappropriately expresses or overexpresses GPC5.

3. A method according to claim 1 or claim 2 wherein the cell inappropriately expresses or overexpresses WT1.

4. A method according to any one of claims 1 to 3 wherein the cell is a cancer cell.

5. A method according to claim 4 wherein the cancer is rhabdomyosarcoma, lymphoma, non-small cell lung cancer, bladder cancer, breast cancer, prostate cancer, a neuroglial tumour, squamous cell carcinoma of the head and neck, leukemia, leiomyosarcoma, liposarcoma, malignant fibrous histocytoma of bone or soft tissues, melanoma, mesothelioma, thyroid cancer, lung cancer, testicular cancer or ovarian cancer.

6. A method according to any one of claims 1 to 5 wherein the cell does not carry a chromosomal amplicon at 13q31.

7. A method according to any one of claims 1 to 6 wherein the binding agent binds to the GPC5 core protein and/or its associated heparan sulphate chains.

8. A method according to claim 7 wherein the binding agent is an antibody or a peptide.

9. A method according to claim 7 or claim 8 further comprising contacting the cell with a therapeutic agent.

10. A method according to claim 9 wherein the therapeutic agent is associated with the binding agent.

11. A method according to claim 9 wherein the therapeutic agent is capable of binding to the binding agent.

12. A method according to any one of claims 9 to 11 wherein the therapeutic agent comprises a cytotoxic molecule, a precursor molecule capable of being converted into a cytotoxic molecule by enzyme action, a cell or molecule of the immune system, or a viral vector.

13. A method according to any one of claims 1 to 6 wherein the GPC5 antagonist inhibits expression of functional GPC5 at the cell surface.

14. A method according to claim 13 wherein the GPC5 antagonist comprises a nucleic acid sequence complementary to the sequence of GPC5 mRNA or pre-mRNA.

15. A method according to claim 14 wherein the GPC5 antagonist comprises antisense RNA, dsRNA such as RNAi or siRNA, or a ribozyme.

16. A method according to any one of claims 1 to 6 wherein the GPC5 antagonist inhibits activity of GPC5 protein.

17. A method according to claim 16 wherein the GPC5 antagonist is an antibody or a peptide.

18. A method according to any one of claims 13 to 17 further comprising contacting the cell with a therapeutic agent.

19. A method according to claim 18 wherein the GPC5 antagonist increases the sensitivity of the cell to the therapeutic agent.

20. A method of determining the susceptibility of a cancer to treatment with a GPC5 antagonist or binding agent, comprising determining the presence, absence or level of expression of GPC5 and/or WT1 in a cell from said cancer.

21. A method according to claim 20 further comprising the step of determining the presence, absence or degree of chromosomal amplification at 13q31 in a cell from said cancer.

22. A method of determining the susceptibility of a cancer to treatment with a GPC5 antagonist or binding agent, comprising determining the presence, absence or degree of chromosomal amplification at 13q31.

23. A method according to claim 22 further comprising determining the presence, absence or level of expression of GPC5 and/or WT1 in a cell from said cancer.

24. A method according to any one of claims 20 to 23 wherein the cancer is rhabdomyosarcoma, lymphoma, non-small cell lung cancer, bladder cancer, breast cancer, prostate cancer, a neuroglial tumour, squamous cell carcinoma of the head and neck, leukemia, leiomyosarcoma, liposarcoma, malignant fibrous histocytoma of bone or soft tissues, melanoma, mesothelioma, thyroid cancer, lung cancer, testicular cancer or ovarian cancer.

25. A method of screening for the presence of a cancer in a patient, the method comprising determining the presence, absence or level of circulating GPC5 in the patient.

26. A method according to claim 25 comprising determining the presence, absence or level of circulating GPC5 in a sample derived from the patient.

27. A method according to claim 26 wherein the sample is blood, serum or plasma.

28. A method according to claim 26 or claim 27 wherein the method comprises contacting the sample with a GPC5 binding agent.

29. A method according to any one of claims 25 to 28 wherein the cancer is rhabdomyosarcoma, lymphoma, non-small cell lung cancer, bladder cancer, breast cancer, prostate cancer, a neuroglial tumour, squamous cell carcinoma of the head and neck, leukemia, leiomyosarcoma, liposarcoma, malignant fibrous histocytoma of bone or soft tissues, melanoma, mesothelioma, thyroid cancer, lung cancer, testicular cancer or ovarian cancer.

30. A method of screening for an agent capable of inhibiting proliferation of a target cell, comprising the steps of:

(i) contacting GPC5 protein with one or more candidate substances;

(ii) selecting one or more candidate substances based on their ability to bind GPC5 protein;

(iii) contacting said one or more selected substances with a target cell; and

(iv) determining the effect of said selected substance(s) on proliferation of said cell.

31. A method according to claim 30 wherein the cell inappropriately expresses or overexpresses GPC5.

32. A method according to claim 30 or claim 31 wherein the cell is a cancer cell.

33. A method according to claim 32 wherein the cancer is rhabdomyosarcoma, lymphoma, non-small cell lung cancer,

bladder cancer, breast cancer, prostate cancer, a neuroglial tumour, squamous cell carcinoma of the head and neck, leukemia, leiomyosarcoma, liposarcoma, malignant fibrous histocytoma of bone or soft tissues, melanoma, mesothelioma, thyroid cancer, lung cancer, testicular cancer or ovarian cancer.

34. A method for determining a prognosis for a patient with breast cancer comprising assigning a prognosis to the patient based on the expression levels of GPC5 in a breast tumour from that patient.

35. A method according to claim 34 which comprises determining the presence, absence or degree of expression of GPC5 in vitro using a sample containing breast cancer cells from the patient.

36. A method according to claim 35 which comprises contacting the sample with a GPC5 binding agent.

37. A method for monitoring the success of a treatment for a cancer previously found to express GPC5, comprising determining GPC5 expression in cells of the cancer.

38. A method according to claim 37 comprising contacting cells of the cancer with a GPC5 binding agent.

39. A method according to claim 38 which is performed in vitro using a sample containing cancer cells from the patient.

40. A method according to any one of claims 37 to 39 comprising comparing the results obtained with results of an equivalent assay performed for the same patient before treatment and/or at an earlier stage of treatment.

41. A method according to any one of claims 37 to 40 comprising determining the level of expression of GPC5 within

cells of the cancer, or determining the number or density of cells expressing or overexpressing GPC5.